

Title (en)
Projection-type image display apparatus

Title (de)
Projektionsähnliche Bildanzeigevorrichtung

Title (fr)
Appareil d'affichage d'images par projection

Publication
EP 1868032 A3 20101110 (EN)

Application
EP 07252213 A 20070530

Priority
JP 2006153587 A 20060601

Abstract (en)
[origin: EP1868032A2] A projection-type image display apparatus for projecting an image, enlargedly, onto a projection surface, comprises: an image display element; a lens group, being disposed behind the image display element, comprising therein, a front lens group made up with a plural number of lenses, including, at least, a refractive lens, having a positive power and being rotationally symmetric in a surface configuration thereof, and a rear lens group made up with a plural number of lenses, including, at least, a lens having a free curved surface configuration and being rotationally asymmetric, thereby emitting the image displayed on the image display element; a reflection mirror for reflecting the light from the lens group, thereby projection onto the projection surface, obliquely; and a movement member for moving the plural number of lenses of the rear lens group.

IPC 8 full level
G03B 21/14 (2006.01)

CPC (source: EP US)
G03B 21/147 (2013.01 - EP US); **G03B 21/28** (2013.01 - EP US)

Citation (search report)

- [I] JP 2004258218 A 20040916 - MINOLTA CO LTD
- [A] US 6450648 B1 20020917 - OHZAWA SOH [JP], et al

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
EP 1868032 A2 20071219; EP 1868032 A3 20101110; EP 1868032 B1 20190102; CN 100555068 C 20091028; CN 101082760 A 20071205; JP 2007322811 A 20071213; US 2007279598 A1 20071206; US 2010283976 A1 20101111; US 7766487 B2 20100803; US 8002417 B2 20110823

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EP 07252213 A 20070530; CN 200710108523 A 20070531; JP 2006153587 A 20060601; US 75587807 A 20070531; US 84065110 A 20100721